**PATENT** Attorney Docket No.: SPRUSON1100

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Darren R. Shafren

Art Unit:

1645

Application No.:

10/539,219

Examiner:

Not Yet Assigned

Filed:

January 17, 2006

Title:

Conf. No.:

4529

METHOD OF TREATING A MALIGNANCY IN A SUBJECT VIA

DIRECT PICORNAVIRAL-MEDIATED ONCOLYSIS

#### MAIL STOP AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. § 1.97, enclosed are references relating to the above-identified application. For the convenience of the Examiner, the references are listed on the attached Form PTO-1449 and copies of the foreign and non-patent documents are enclosed herewith.

It is respectfully requested that these references be considered in the examination of this application and their consideration be made of written record in the application file.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on June 12, 2006, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Ramona DeRyan

In re Application of:

Darren R. Shafren

Application No.: 10/539,219 Filed: January 17, 2006

Page 2

PATENT Atty Docket No.: SPRUSON1100

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement, because it is being filed before the mailing of a first Office Action on the merits. However, if any fee is required, authorization is hereby given to charge the amount of any such fee, or credit any overpayment, to Deposit Account No. <u>07-1896</u> referencing the above-identified attorney docket number. A copy of the Transmittal Sheet is enclosed.

Respectfully submitted,

Date: June 12, 2006

Antony M. Novom, J.D. Registration No. 45,517 Telephone: (858) 638-6641 Facsimile: (858) 677-1465

DLA PIPER RUDNICK GRAY CARY US LLP 4365 Executive Drive, Suite 1100 San Diego, California 92121-2133 USPTO Customer No. 28213

**PATENT** 

Attorney Docket No.: SPRUSON1100

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## TRANSMITTAL SHEET

Sir:

Transmitted herewith for the above-identified application please find:

- 1. Information Disclosure Statement (2 pgs.);
- 2. Form PTO 1449 (3 pgs.);
- 3. Twenty-six (26) references; and
- Return Receipt Postcard. 4.

CERTIFICATION UNDER 37 CFR §1.8

I hereby certify that the documents referred to as enclosed herein are being deposited with the United States Postal Service as first class mail on June 12, 2006, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313

Ramona DeRyan

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DLA PIPER RUDNICK GRAY CARY US LLP 4365 Executive Drive, Suite 1100 San Diego, California 92121-2133 USPTO Customer No. 28213

| FORM PTO-1449 U.S. Department of Commerce Patent and PE | Docket No.:<br>SPRUSON1100 | Application No.:<br>10/539,219 |
|---|----------------------------|--------------------------------|
| Trademark Office  | <b>%</b>                   |                                |
| JUN 1 5 2006  | 67-PP                      |                                |
| INFORMATION DISCLOSURE TATEMENT                         | Filing Date:               | Group Art Unit:                |
| BY APPLICANT  | January 17, 2006           | 1645                           |

## **U.S. PATENT DOCUMENTS**

| EXAM.<br>INITIALS | DOCUMENT<br>NUMBER | DATE | NAME | CLASS | SUB-<br>CLASS | FILING<br>DATE |
|-------------------|--------------------|------|------|-------|---------------|----------------|
|                   |                    |      |      |       |               | 1              |

## **FOREIGN PATENT DOCUMENTS**

| EXAM.<br>INITIALS |   | DOCUMENT<br>NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION<br>(YES/NO) |
|-------------------|---|--------------------|------|---------|-------|---------------|-------------------------|
|                   |   |                    |      |         |       |               |                         |
|                   | 3 |                    |      |         |       |               |                         |

# OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

| AA | Andreansky, et al., "The application of genetically engineered herpes simplex viruses to the treatment of experimental brain tumors." <i>Proc. Natl. Acad. Sci. USA</i> Vol. 93, pp. 11313-11318 (1996).             |
|----|--|
| AB | Ansardi, et al., "RNA Replicons Derived from Poliovirus Are Directly Oncolytic for Human Tumor Cells of Diverse Origins." <i>Cancer Research</i> , Vol. 61, pp. 8470-8479 (2001).                                    |
| AC | Bartolazzi, et al., "Localization of the alpha 3 beta 1 Integrin in Some Common Epithelial Tumors of the Ovary and in Normal Equivalents." AntiCancer Research, 13:1-12 (1993).                                      |
| AD | Bergelson, et al., "The Integrin VLA-2 Binds Echovirus 1 and Extracellular Matrix Ligands by Different Mechanisms." <i>J. Clin. Invest.</i> , Vol. 92, pp. 232-239 (1993).   |
| AE | Cannistra, et al., "Expression and Function of beta 1 and alpha v beta 3 Integrins in Ovarian Cancer." <i>Gynecologic Oncology</i> , Vol. 58, pp. 216-225 (1995).  |
| AF | Cardarelli, et al., "The Collagen Receptor alpha 2 beta 1, from MG-63 and HT1080 Cells, Interacts with a Cyclic RGD Peptide." <i>The Journal of Biological Chemistry</i> , Vol. 267, No. 32, pp. 23159-23164 (1992). |

| EXAMINER     | DATE CONSIDERED |
|--------------|-----------------|
| GT\6491805.1 |                 |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 1

| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office | Docket No.:<br>SPRUSON1100   | Application No.:<br>10/539,219 |  |
|---|------------------------------|--------------------------------|--|
|   | Applicants: Darren R. Shafre | n                              |  |
| INFORMATION DISCLOSURE STATEMENT                                      | Filing Date:                 | Group Art Unit:                |  |
| BY APPLICANT  | January 17, 2006             | 1645                           |  |

| AG | Casey, et al., "Beta 1-Integrins Regulate the Formation and Adhesion of Ovarian Carcinoma Multicellular Spheriods." <i>American Journal of Pathology</i> , Vol. 159, No. 6, pp. 2071-2080 (2001).  |
|----|--|
| AH | Chan, et al., "In Vitro and in Vivo Consequences of VLA-2 Expression on Rhabdomyosarcoma Cells." Science, Vol. 251, pp. 1600-1602 (1991).  |
| AI | Frankel, et al., "Abrogation of Taxol-induced G <sub>2</sub> -M Arrest and Apoptosis in Human Ovarian Cancer Cells Grown as Multicellular Tumor Spheriods." <i>Cancer Research</i> , Vol. 57, pp. 2388-2393 (1997).                              |
| AJ | He, et al., "A simplified system for generating recombinant adenoviruses." <i>Proc. Natl. Acad. Sci.</i> USA, Vol. 95, pp. 2509-2514 (1998).   |
| AK | Kamata, Tetsuji and Takada, Yoshikazu, "Direct Binding of Collagen to the I Domain of Integrin α2β1 (VLA-2, CD49b/CD29) in a Divalent Cation-independent Manner." <i>The Journal of Biological Chemistry</i> , Vol. 269, pp. 26006-26010 (1994). |
| AL | Kramer, Randall H. and Marks, Nancy, "Identification of Integrin Collagen Receptors on Human Melanoma Cells." <i>The Journal of Biological Chemistry</i> , Vol. 264, No. 8, pp. 4684-4688 (1988).  |
| AM | Moser, et al., "Evidence for Preferential Adhesion of Ovarian Epithelial Carcinoma Cells to Type I Collagen Mediated by the α2β1 Integrin." <i>Int. J. Cancer</i> , Vol. 67, pp. 695-701 (1996).   |
| AN | Natali, et al., "Clinical Significance of α <sub>ν</sub> β <sub>3</sub> Integrin and Intercellular Adhesion Molecule-1 Expression in Cutaneous Malignant Melanoma Lesions." Cancer Research, Vol. 57, pp. 1554-1560 (1997).                      |
| AO | Nemunaitis, John, "Oncolytic viruses." <i>Investigational New Drugs</i> , Vol. 17, pp. 375-386 (1999).   |
| AP | Pietiäinen, Vilja, "Effects of echovirus 1 Infection on Cellular Gene Expression."<br>Virology, Vol. 276, pp. 243-250 (2000).  |
| AO | Pevear, et al., "Activity of Pleconaril against Enteroviruses." Antimicrobial Agents and Chemotherapy, Vol. 43, No. 9, pp. 2109-2115 (1999).   |
| AR | Ramos, et al., "Analysis of Integrin Receptors for Laminin and Type IV Collagen on Metastatic B16 Melanoma Cells." <i>Cancer Research</i> , Vol. 50, pp. 728-734 (1990).   |

| EXAMINER     | DATE CONSIDERED |
|--------------|-----------------|
| GT\6491805.1 |                 |

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| FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office | Docket No.:<br>SPRUSON1100       | <b>Application No.:</b> 10/539,219 |
|---|----------------------------------|------------------------------------|
|   | Applicants: Darren R. Shafre     | en                                 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT                         | Filing Date:<br>January 17, 2006 | Group Art Unit:<br>1645            |

| AS | Randazzo, et al., "Treatment of Experimental Intracranial Murine Melanoma with a Neuroattenuated Herpes Simplex Virus 1 Mutant." <i>Virology</i> , Vol. 211, pp. 94-101 (1995).                                 |
|----|---|
| AT | Rossman, et al., "Cell Recognition and Entry by Rhino- and Enteroviruses." <i>Virology</i> , Vol. 269, pp. 239-247 (2000).  |
| AU | Satyamoorthy, et al., "Adenovirus Infection Enhances Killing of Melanoma Cells by a Mitotoxin.", Cancer Research, Vol. 57, pp. 1873-1876 (1997).  |
| AV | Shafren, et al., "Coxsackievirus A21 Binds to Decay-Accelerating Factor but Requires Intercellular Adhesion Molecule 1 for Cell Entry." <i>Journal of Virology</i> , Vol. 71, No. 6, pp. 4736-4743 (1997).      |
| AW | Strong, et al., "The molecular basis of viral oncolysis: usurpation of the Ras signaling pathway by reovirus." <i>The EMBO Journal</i> , Vol. 17, No. 12, pp. 3351-3362 (1998).                                 |
| AX | Tsao, et al., "Characterization of Human Ovarian Surface Epithelial Cells Immortalized by Human Papilloma Viral Oncogenes (HPV-E6E7 ORFs)." Experimental Cell Research, Vol. 218, pp. 499-507 (1995).           |
| AY | Xiao, et al., "Interaction of Coxsackievirus A21 with Its Cellular Receptor, ICAM-1."  Journal of Virology, Vol. 75, No. 5, pp. 2444-2451 (2001).   |
| AZ | Xing, Li, "Non-enveloped Virus Infection Probed with Host Cellular Molecules: A Structural Study." Centre for Biotechnology, Department of Biosciences at Novum, Karolinska Institutet, Sweden: Stockholm 2002. |

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